

Prevalence of Fentanyl in Miami-Dade County Death Investigations

Diane M. Boland, PhD, F-ABFT

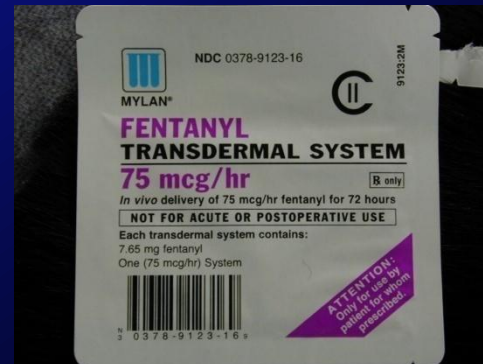
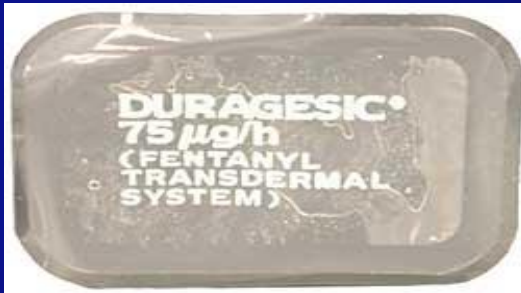
Director of Toxicology

Miami-Dade Medical Examiner Department

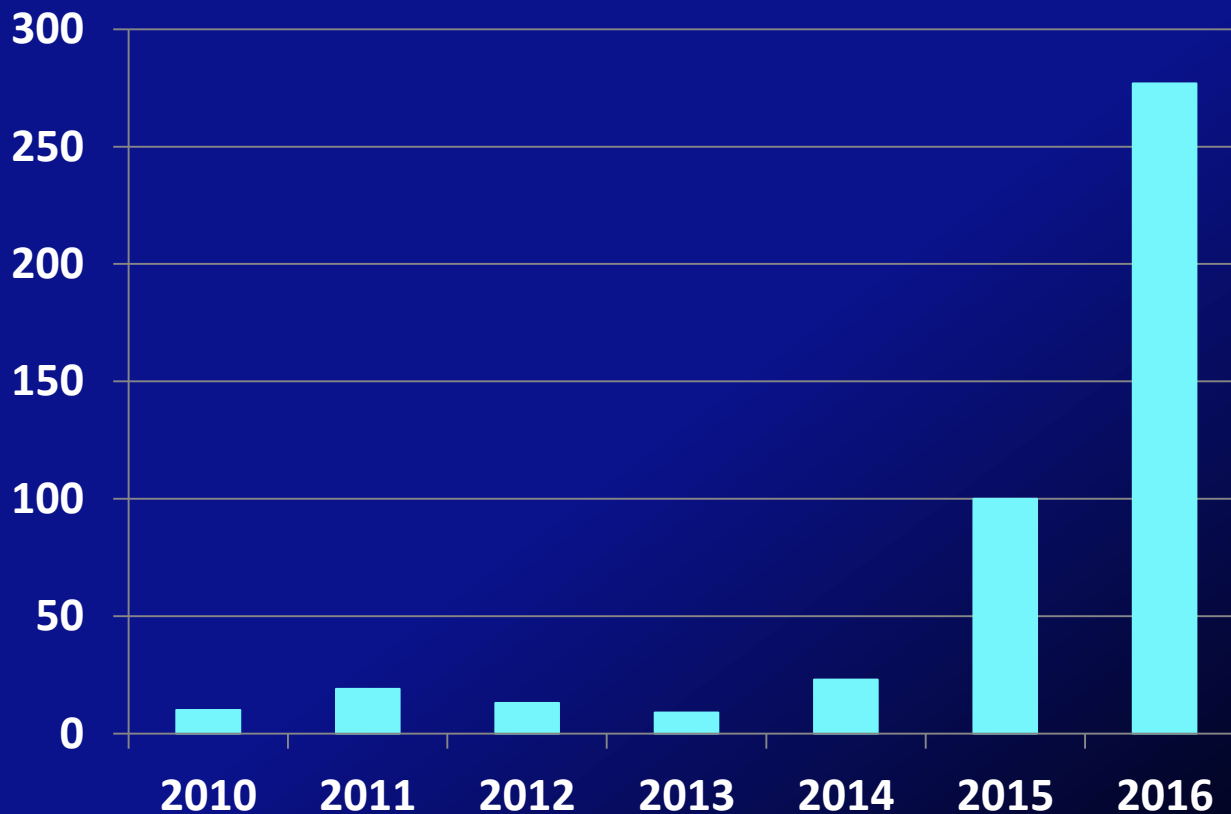


Fentanyl

- Schedule II synthetic opioid analgesic (treats pain)
- 50-100x more powerful than morphine / heroin
- Typically prescribed in the form of a transdermal patch
- Abuse potential is high due to euphoric effects
 - Chewing or sucking on a prescribed patch bypasses the time release
 - Fentanyl produced in clandestine laboratories is typically in powder or pill form and can be swallowed, snorted, or injected
 - Fentanyl / Heroin relationship?



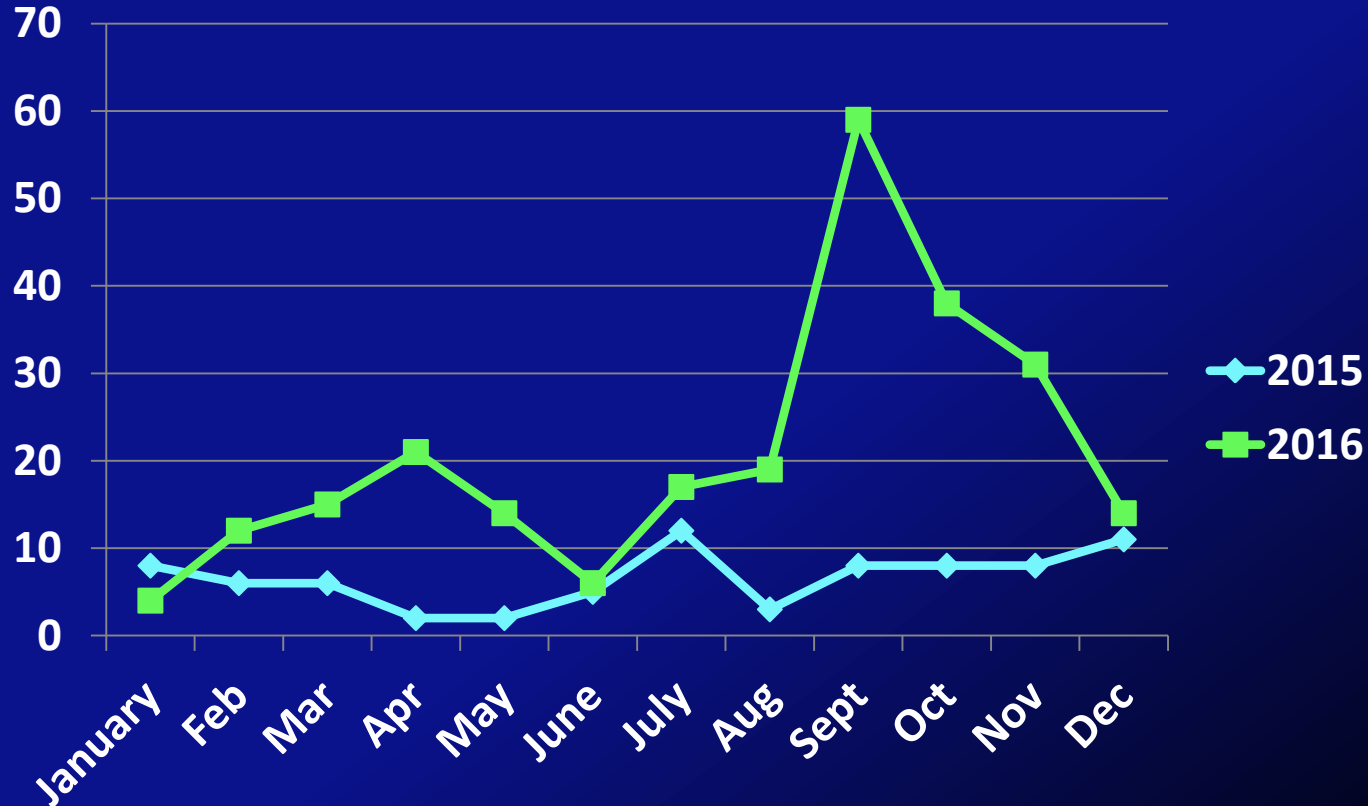
MDME Fentanyl Cases Present and Cause 2010 - 2016



↑
Illicit fentanyl

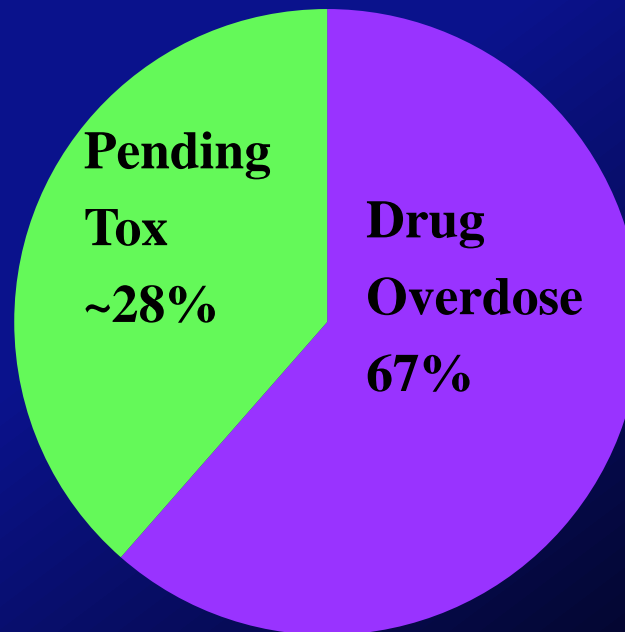


Illicit Fentanyl Cases 2015 - 2016



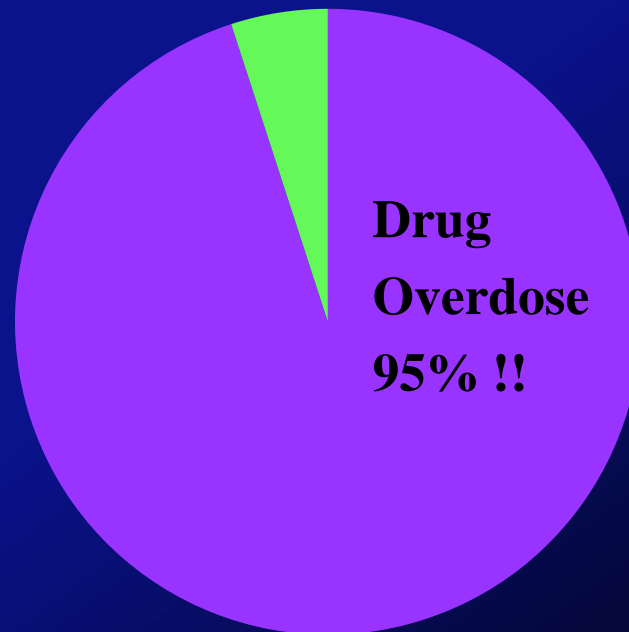
Fentanyl - Cause of Death 2014 - 2016

- Fentanyl has been listed in the cause of death in 67% of the cases in which fentanyl was identified
- 28% of fentanyl positive cases are still pending toxicology or pending review by medical examiner.



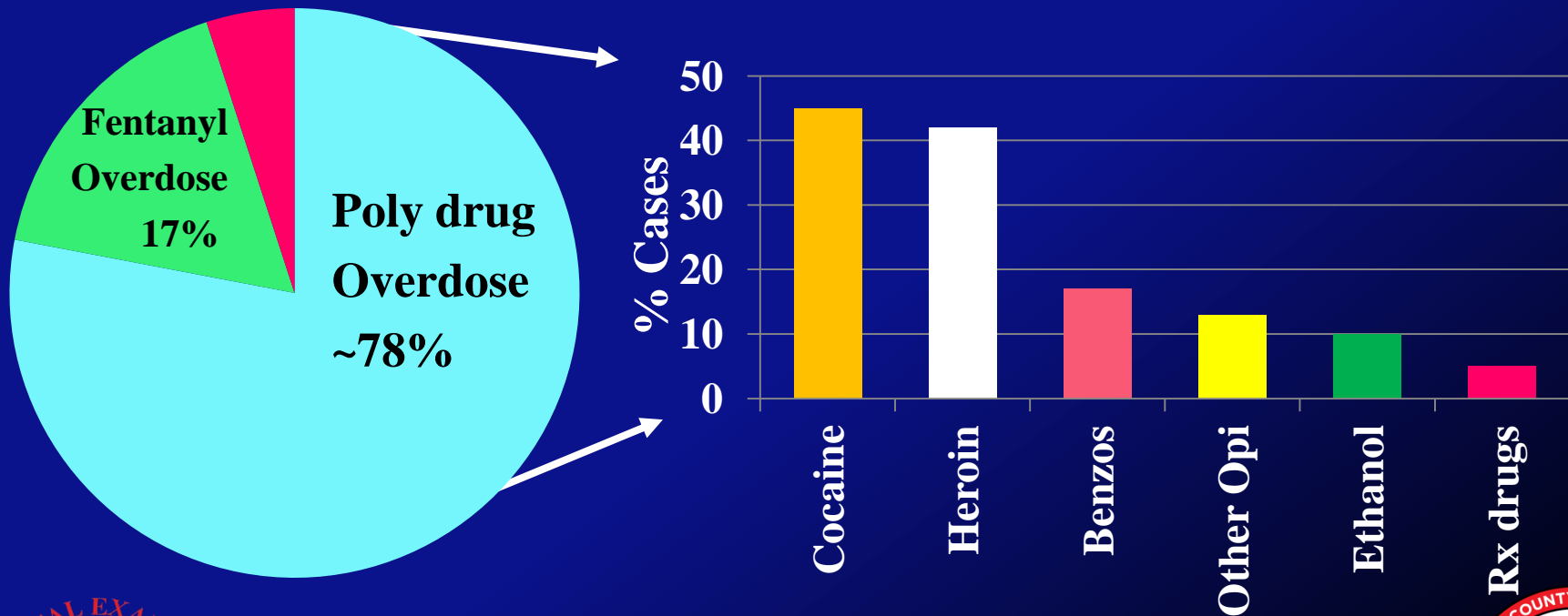
Fentanyl - Cause of Death 2014 - 2016

- Pending toxicology cases will most likely include fentanyl or fentanyl analog(s) in cause of death



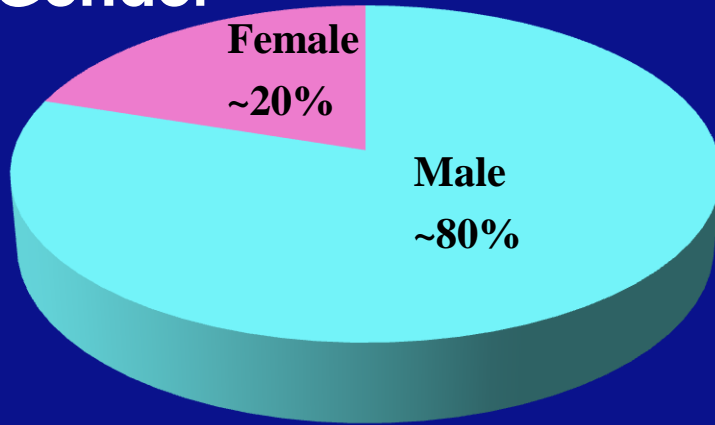
Fentanyl - Cause of Death

- From April 2014 - 2016, the majority of deaths involving fentanyl (~80%) were poly-drug overdose cases

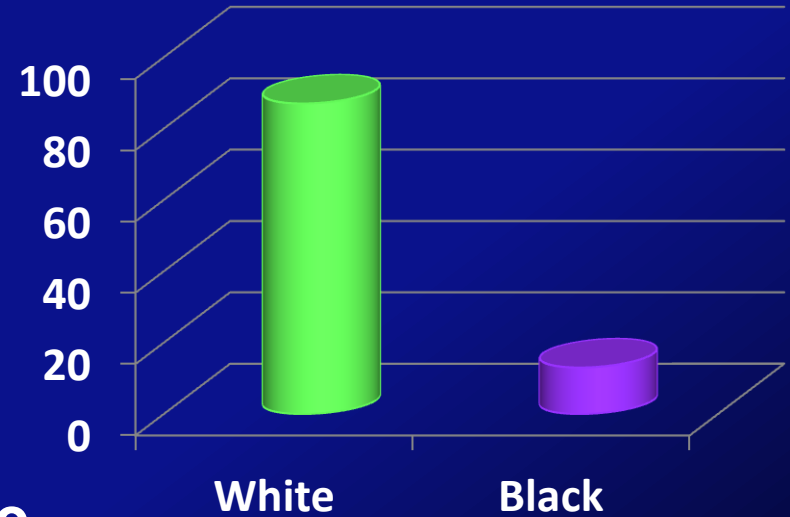


Demographics

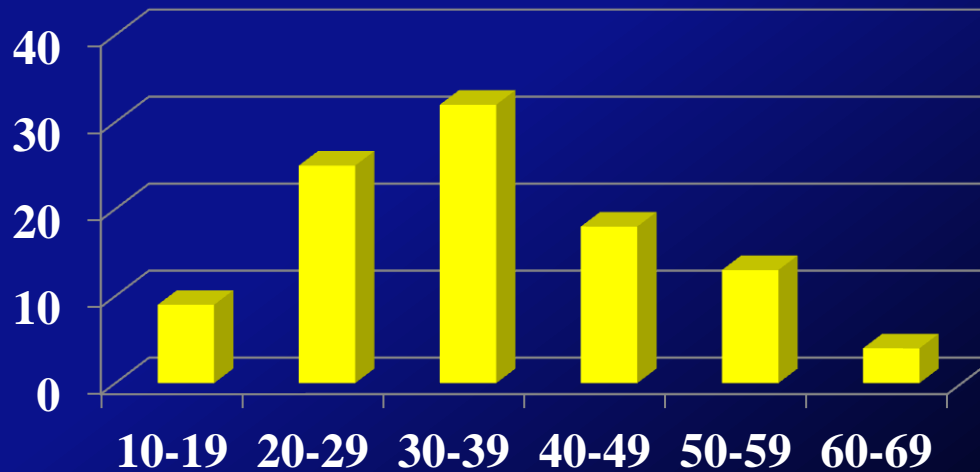
Gender



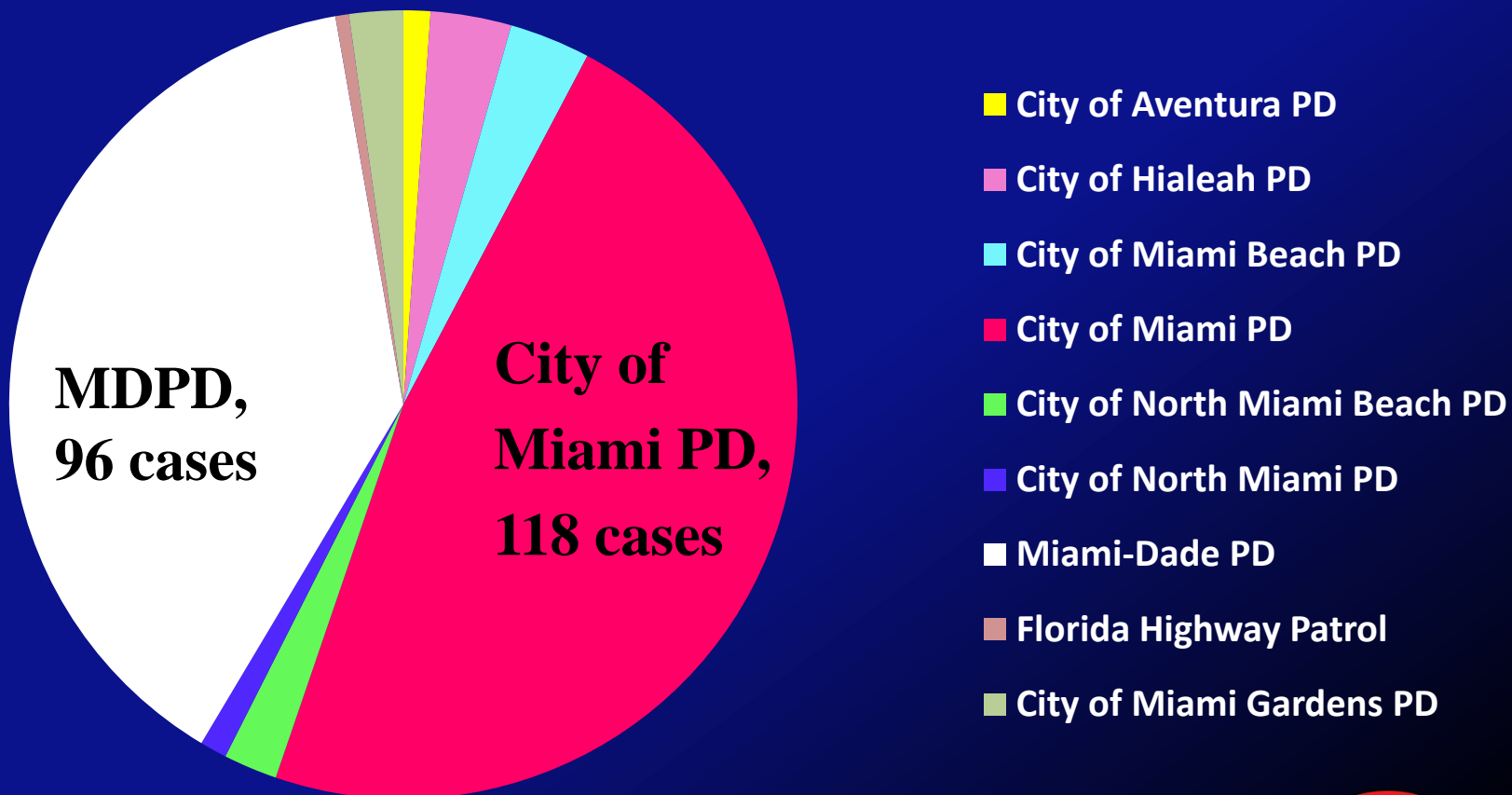
Race



Age Range



Fentanyl by Police Agency



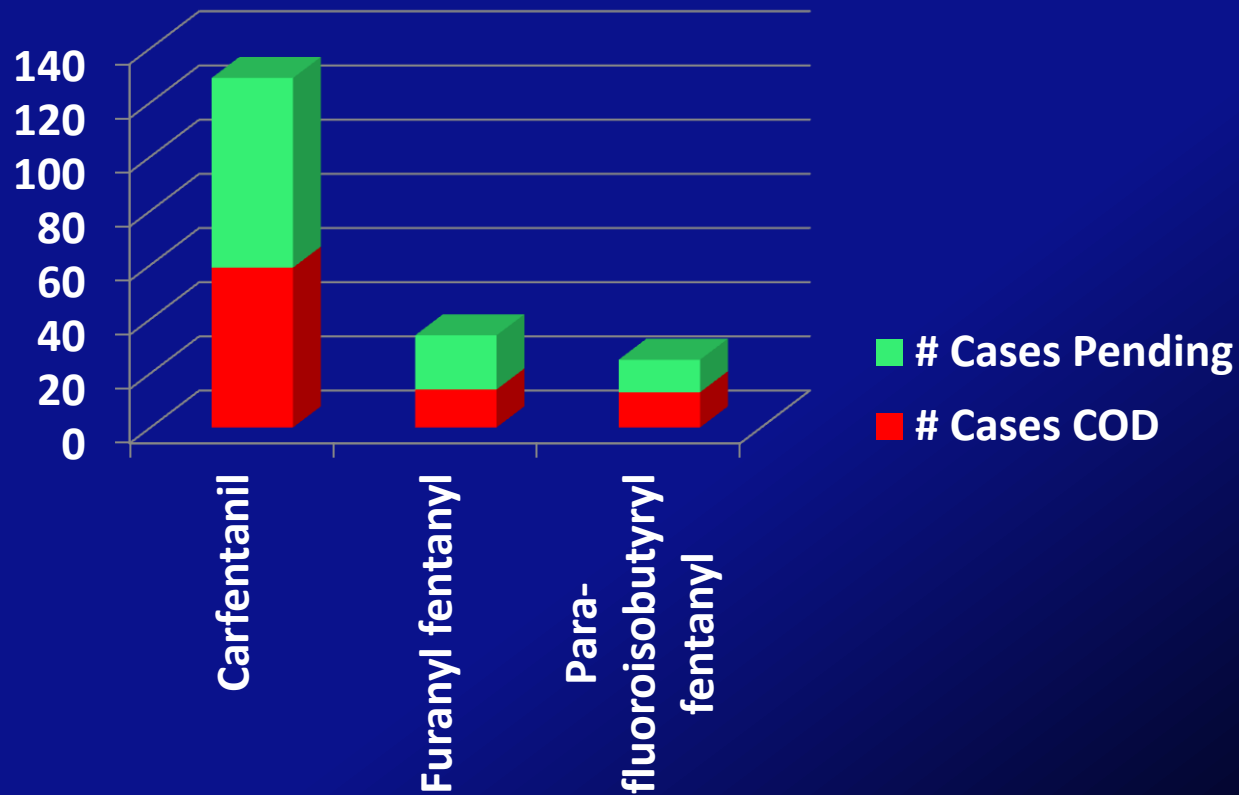
Fentanyl Analogs

- Beta-hydroxythiofentanyl
- Acetyl fentanyl
- Para-fluorobutyrylfentanyl / para fluoroisobutyrylfentanyl *
- Furanylfentanyl*
- Butyrylfentanyl*
- Carfentanil* - 100x more potent than fentanyl!!

* Identified Sept 2016 - present



Fentanyl Analogs



Summary

- From 2010 to 2016, fentanyl and/or analogs have been identified in **451** cases; the majority of those cases occurred in 2015 and 2016
- From 2014 to 2016, fentanyl and/or analogs have been identified in **376** cases
 - **251** medical examiner cases (67%) list fentanyl and/or analogs in the cause of death; this number will increase to over 90% once pending cases are completed
- Fentanyl related deaths are most common among white males, 30 – 39 years of age



Summary cont..

- The majority of cases involve multiple drugs, the most common are **heroin** and **cocaine**
- Fentanyl analogs have been identified in approximately **150** cases since Sept 2016
 - Carfentanil, 86%
 - Furanyl fentanyl, 23%
 - Para-fluoroisobutyryl fentanyl, 17%



Thank You

Diane M. Boland

dboland@miamidade.gov

